

## UNCLASSIFIED

<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>								DATE <b>February 2002</b>	
BUDGET ACTIVITY <b>07 - Operational System Development</b>				PE NUMBER AND TITLE <b>0401132F C-130J PROGRAM</b>				PROJECT <b>5061</b>	
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
5061      C-130J	0	0	10,000	13,800	6,000	2,500	6,100	0	38,400
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

**(U) A. Mission Description**

This is an FY03 NEW START. Beginning in FY03, C-130J program RDT&E funding will provide for: 1) the development, integration, and testing of International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA)-mandated Global Air Traffic Management (GATM) and navigation safety (nav safety) capabilities for the C-130J weapon system; 2) the development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing of this platform; and 3) the development, integration, and testing of C-130J enhancements identified by Air Mobility Command (AMC), which is the USAF lead operating command for the C-130J weapon system.

The C-130J is a medium-size transport aircraft capable of performing a variety of combat delivery (airlift) operations across a broad range of mission environments. As such, the aircraft must be capable of worldwide operations. The C-130J aircraft, in its present Block 5.3 configuration, is partially GATM/nav safety compliant. Capabilities provided in the Block 5.3 configuration include Required Navigation Performance (RNP)-10 (miles), RNP-5, Basic Area Navigation (BRNAV), Traffic Alert and Collision Avoidance System (TCAS) Version 7.0, FM immunity for Instrument Landing System (aka protected ILS), and the aircraft communications system software necessary to operate VHF communications radios with 8.33 MHz frequency separation. During FY02, the C-130J will undergo flight testing to verify compliance with the Reduced Vertical Separation Minimum (RVSM) requirement. These RDT&E funds will enable development, integration, and testing of the remaining GATM/nav safety requirements needed on C-130J aircraft. These capabilities include RNP-4, RNP-1, Terrain Approach Warning System (TAWS), Selective Availability Anti-Spoofing Module (SAASM) Global Positioning System (GPS), Local Area Augmentation System (LAAS), Wide Area Augmentation System (WAAS), Mode Select (Mode S) Beacon Transponder System with data link capability, Automatic Dependent Surveillance-Address (ADS-A), Automatic Dependent Surveillance-Broadcast (ADS-B), satellite communications (SATCOM) voice and data link capability, high frequency data link (HFDDL), Controller-Pilot Data Link Communications (CPDLC), and AMC Mobility 2000 (M2K) communications.

The current C-130J Operational Requirements Document (ORD), validated 17 Apr 99, identifies the GATM/nav safety requirements for the C-130J. Supplemental guidance for the various GATM/nav safety requirements is provided via numerous ICAO, FAA, and DOD standards. Where possible, the C-130J GATM/nav safety solution set will be common with other USAF/AMC weapon systems performing similar GATM/nav safety upgrades.

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<p>(U) <b><u>A. Mission Description Continued</u></b></p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$10,000 Conduct non-recurring engineering design and software development for GATM/nav safety requirements and aircraft deficiencies/product improvements.</p> <p>(U) \$10,000 Total</p> <p>(U) <b><u>B. Budget Activity Justification</u></b></p> <p>The C-130J is an operationally deployed weapon system, therefore BA 07 is appropriate. The funds provided in this budget activity are necessary to make the C-130J aircraft fully compliant with known and emerging ICAO/FAA-mandated GATM/nav safety requirements and to correct weapon system deficiencies identified in initial flight testing.</p> <p>(U) <b><u>C. Program Change Summary (\$ in Thousands)</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 55%;"></th> <th style="text-align: center; width: 15%;"><u>FY 2001</u></th> <th style="text-align: center; width: 15%;"><u>FY 2002</u></th> <th style="text-align: center; width: 15%;"><u>FY 2003</u></th> <th style="text-align: center; width: 10%;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td>(U) Appropriated Value</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    a. Congressional/General Reductions</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>    b. Small Business Innovative Research</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>    c. Omnibus or Other Above Threshold Reprogram</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>    d. Below Threshold Reprogram</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>    e. Rescissions</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">0</td> </tr> <tr> <td>(U) Adjustments to Budget Years Since FY 2002 PBR</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">10,000</td> <td style="text-align: center;">38,400</td> </tr> <tr> <td>(U) Current Budget Submit/FY 2003 PBR</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">10,000</td> <td style="text-align: center;">38,400</td> </tr> </tbody> </table>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>	(U) Previous President's Budget	0	0	0	0	(U) Appropriated Value	0	0		0	(U) Adjustments to Appropriated Value					a. Congressional/General Reductions	0	0		0	b. Small Business Innovative Research	0	0		0	c. Omnibus or Other Above Threshold Reprogram	0	0		0	d. Below Threshold Reprogram	0	0		0	e. Rescissions	0	0		0	(U) Adjustments to Budget Years Since FY 2002 PBR	0	0	10,000	38,400	(U) Current Budget Submit/FY 2003 PBR	0	0	10,000	38,400
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<div style="display: flex; justify-content: space-between;"> <span>Project 5061</span> <span>Page 2 of 4 Pages</span> <span>Exhibit R-2 (PE 0401132F)</span> </div>																																																									

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<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>							DATE <b>February 2002</b>		
BUDGET ACTIVITY <b>07 - Operational System Development</b>				PE NUMBER AND TITLE <b>0401132F C-130J PROGRAM</b>				PROJECT <b>5061</b>	
(U) <b><u>C. Program Change Summary (\$ in Thousands) Continued</u></b>									
(U) <u>Significant Program Changes:</u>									
(U) <b><u>D. Other Program Funding Summary (\$ in Thousands)</u></b>									
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E	0	0	10,000	13,800	6,000	2,500	6,100		38,400
(U) Other APPN	0								
(U) PE 0401132F, C-130J Procurement (BP1100)									
(U) Mod MN-_1701				5,275	43,975	42,000	31,500		122,750
(U) Mod MN-_6298						1,500	18,500		20,000
(U) <b><u>E. Acquisition Strategy</u></b>									
The C-130J weapon system will be modified using a 'block upgrade' strategy. The full GATM/nav safety requirement will be met in two phases -- Block 6.0, which will begin with FY03 RDT&E funding and continue with FY04 RDT&E funding, and Block 6.1, which will use FY05 and FY06 RDT&E funding to complete the total GATM/nav safety development effort. Block 6.2 will begin with FY07 RDT&E funding and incorporate additional C-130J improvements not included in prior block upgrades.									
The proportion of GATM/nav safety requirements allocated to Blocks 6.0 and 6.1 will be determined via an on-going trade study being conducted by Lockheed Martin (the C-130J prime contractor). The results of this study will be available in May 2002. In addition to the GATM/nav safety requirements contained in Blocks 6.0 and 6.1, a to-be-determined number of aircraft deficiency reports (DRs) and product enhancements will be allocated to each block upgrade based on AMC's priorities for aircraft improvements.									
Lockheed Martin will be the prime contractor for these efforts, perform the non-recurring engineering and, following the successful conclusion of flight testing and certification of each block upgrade, install production retrofit kits on USAF C/WC/EC-130J aircraft.									
(U) <b><u>F. Schedule Profile</u></b>									
	<u>FY 2001</u>			<u>FY 2002</u>			<u>FY 2003</u>		
	1	2	3	4	1	2	3	4	1
(U) Block 6.0 CECP on contract									X
Project 5061									

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2002							
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT						
07 - Operational System Development					0401132F C-130J PROGRAM				5061						
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>															
					<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>						
(U)	Block 6.0 non-recurring engineering design/software development				0		0		10,000						
(U)	Total				0		0		10,000						
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>															
(U) <u>Performing Organizations:</u>															
<u>Contractor or Government Performing Activity</u>		<u>Contract Method/Type or Funding Vehicle</u>		<u>Award or Obligation Date</u>		<u>Performing Activity EAC</u>		<u>Project Office EAC</u>		<u>Total Prior to FY 2001</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget to Complete</u>	<u>Total Program</u>
Lockheed Martin Aeronautics, CPFF Marietta, GA		1Q/FY03													
<u>Product Development Organizations</u>															
Aeronautical Systems Center (AFMC), WPAFB, OH												10,000	28,400	38,400	
<u>Support and Management Organizations</u>															
TBD															
<u>Test and Evaluation Organizations</u>															
Air Force Materiel Command (QT&E)															
Air Mobility Command (FDE)															
					<u>Total Prior to FY 2001</u>		<u>Budget FY 2001</u>		<u>Budget FY 2002</u>		<u>Budget FY 2003</u>	<u>Budget to Complete</u>	<u>Total Program</u>		
<u>Subtotals</u>											10,000	28,400	38,400		
Subtotal Product Development															
Subtotal Support and Management															
Subtotal Test and Evaluation															
Total Project											10,000	28,400	38,400		
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